

DIVAR IP 3000

DIP-3040-00N, DIP-3042-2HD, DIP-3042-4HD



BOSCH

en Quick Installation Guide

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1 Safety precautions

Observe the safety precautions in this chapter.

1.1 General safety precautions

Follow these rules to ensure general safety:

- Keep the area around the system clean and free of clutter.
- Place the chassis top cover and any system components that have been removed away from the system or on a table so that they won't accidentally be stepped on.
- While working on the system, do not wear loose clothing such as neckties and unbuttoned shirt sleeves, which can come into contact with electrical circuits or be pulled into a cooling fan.
- Remove any jewelry or metal objects from your body, which are excellent metal conductors that can create short circuits and harm you if they come into contact with printed circuit boards or areas where power is present.

Warning!

Interruption of mains supply:

Voltage is applied as soon as the mains plug is inserted into the mains socket.



However, for devices with a mains switch, the device is only ready for operation when the mains switch (ON/OFF) is in the ON position. When the mains plug is pulled out of the socket, the supply of power to the device is completely interrupted.

Warning!

Removing the housing:

To avoid electric shock, the housing must only be removed by qualified service personnel.



Before removing the housing, the plug must always be removed from the mains socket and remain disconnected while the housing is removed. Servicing must only be carried out by qualified service personnel. The user must not carry out any repairs.

Warning!

Power cable and AC adapter:



When installing the product, use the provided or designated connection cables, power cables and AC adaptors. Using any other cables and adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL or CSA-certified cables (that have UL/CSA shown on the code) for any other electrical devices.

Warning!

Lithium battery:



Batteries that have been inserted wrongly can cause an explosion. Always replace empty batteries with batteries of the same type or a similar type recommended by the manufacturer. Handle used batteries carefully. Do not damage the battery in any way. A damaged battery may release hazardous materials into the environment.

Dispose of empty batteries according to the manufacturer's instructions.

**Warning!**

Handling of lead solder materials used in this product may expose you to lead, a chemical known to the State of California to cause birth defects and other reproductive harm.

Notice!

Electrostatically sensitive device:



To avoid electrostatic discharges, the CMOS/MOSFET protection measures must be carried out correctly. When handling electrostatically sensitive printed circuits, grounded anti-static wrist bands must be worn and the ESD safety precautions observed.

**Notice!**

Installation should only be carried out by qualified customer service personnel in accordance with the applicable electrical regulations.

**Disposal**

Your Bosch product has been developed and manufactured using high-quality materials and components that can be reused.

This symbol means that electronic and electrical devices that have reached the end of their working life must be disposed of separately from household waste.

In the EU, separate collecting systems are already in place for used electrical and electronic products. Please dispose of these devices at your local communal waste collection point or at a recycling center.

1.2 Electrical safety precautions

Basic electrical safety precautions should be followed to protect you from harm and the system from damage:

- Be aware of the locations of the power on/off switch on the chassis as well as the room's emergency power-off switch, disconnection switch or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.
- Do not work alone when working with high voltage components.
- Power should always be disconnected from the system when removing or installing main system components, such as the motherboard or memory modules. When disconnecting power, you should first turn off the system and then unplug the power cords from all the power supply modules in the system.
- When working around exposed electrical circuits, another person who is familiar with the power-off controls should be nearby to switch off the power if necessary.
- Use only one hand when working with powered-on electrical equipment. This is to avoid making a complete circuit, which will cause electrical shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards they come into contact with.
- The power supply power cords must include a grounding plug and must be plugged into grounded electrical outlets. The unit has more than one power supply cord. Disconnect both power supply cords before servicing to avoid electrical shock.
- Mainboard replaceable soldered-in fuses: Self-resetting PTC (Positive Temperature Coefficient) fuses on the mainboard must be replaced by trained service technicians only. The

new fuse must be the same or equivalent as the one replaced. Contact technical support for details and support.

Caution!

Mainboard Battery: There is a danger of explosion if the onboard battery is installed upside down, which will reverse its polarities. This battery must be replaced only with the same or an equivalent type recommended by the manufacturer (CR2032). Dispose of used batteries according to the manufacturer's instructions.

1.3 ESD precautions

Electrostatic Discharge (ESD) is generated by two objects with different electrical charges coming into contact with each other. An electrical discharge is created to neutralize this difference, which can damage electronic components and printed circuit boards. The following measures are generally sufficient to neutralize this difference before contact is made to protect your equipment from ESD:

- Do not use mats designed to decrease electrostatic discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.
- Use a grounded wrist strap designed to prevent static discharge.
- Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Do not let components or printed circuit boards come into contact with your clothing, which may retain a charge even if you are wearing a wrist strap.

- Handle a board by its edges only. Do not touch its components, peripheral chips, memory modules or contacts.
- When handling chips or modules, avoid touching their pins.
- Put the mainboard and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the mainboard.

1.4 Operating precautions

The chassis cover must be in place when the system is operating to assure proper cooling. Out of warranty damage to the system can occur if this practice is not strictly followed.

Note:

Please handle used batteries carefully. Do not damage the battery in any way. A damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations set up by your local hazardous waste management agency to dispose of your used battery properly.

2 System overview

The DIVAR IP 3000 system is an affordable and easy to use all-in-one recording, viewing, and management solution for network surveillance systems of up to 32 channels. All channels are pre-licensed. Running the full Bosch VMS solution and powered by Bosch VRM (Video Recording Manager) including the Video Streaming Gateway to integrate 3rd party cameras, DIVAR IP 3000 is an intelligent IP storage device that eliminates the need for separate NVR (Network Video Recorder) server and storage hardware.

DIVAR IP 3000 is a 4-bay mini tower unit that combines advanced management and state-of-the-art recording management into a single cost-effective, plug and play IP recording appliance for IT-minded customers which are seeking for a state-of-the-art “second generation” DVR and NVR recording solution.

Easy to install and operate, DIVAR IP 3000 features wizard-based set-up and centralized configuration to reduce installation times. All components are pre-installed and pre-configured. Simply connect to the network and turn on the unit – DIVAR IP 3000 is ready to begin recording straight out of the box.

Bosch Video Management System manages all IP and digital video and audio, plus all the security data being transmitted across your IP network. It seamlessly combines IP cameras and encoders, provides system-wide event and alarm management, system health monitoring, user and priority management.

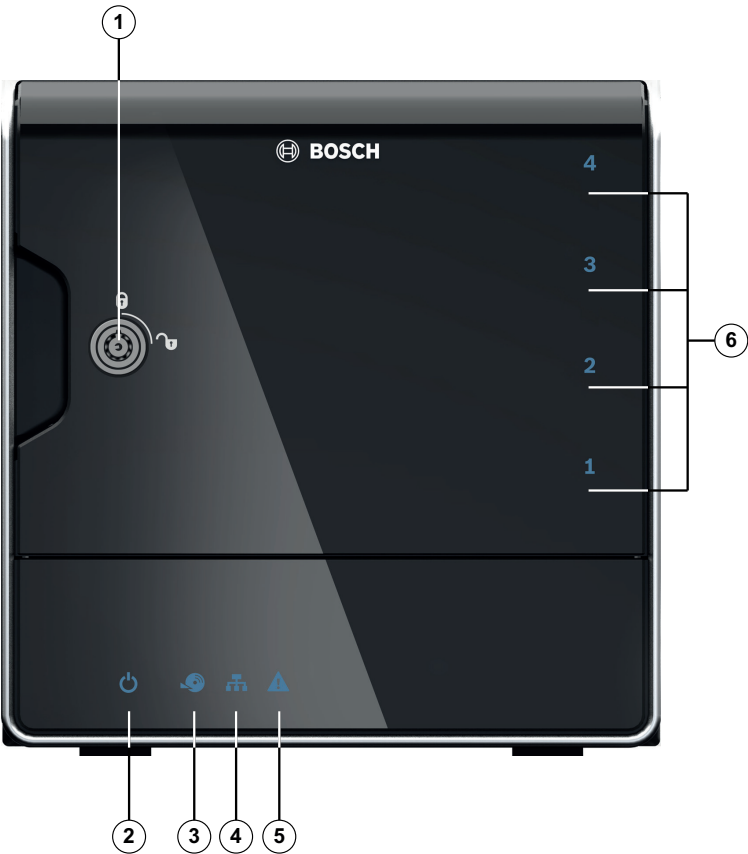
DIVAR IP 3000 features front-swappable SATA-II hard drives providing up to 8 TB of gross storage capacity. All system software is pre-installed and pre-activated – creating an out-of-the-box ready-to-use video management appliance.

DIVAR IP 3000 utilizes Windows Storage Server 2008 R2 operating system.

2.1 Device views

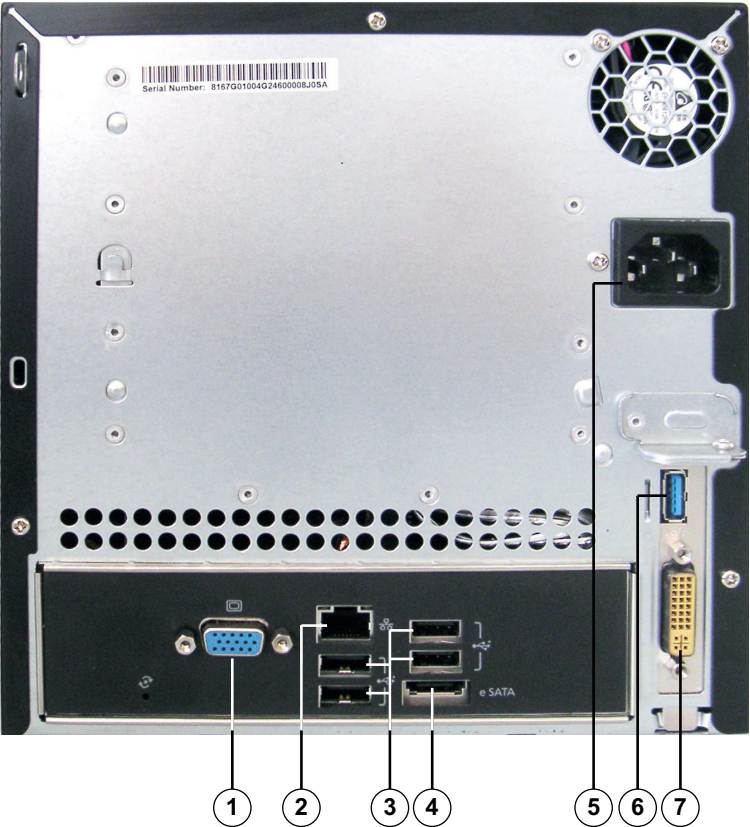
There are several LEDs on the front and rear of the chassis. The LEDs show the over-all status of the system and the activity and health of specific components.

Front view:



1	Lock for front cover	4	LAN activity LED
2	Power on/off LED	5	System status LED
3	Hard disk access LED	6	Individual hard disk LED

Rear view:



1	1x VGA (monitor)	5	Mains connection 100 - 240 VAC
2	1x Ethernet (RJ45)	6	1x USB 3.0 Note: Do not use this port for keyboard and mouse.
3	4x USB 2.0 Note: Use these ports for keyboard and mouse connection.	7	1x DVI (monitor), for local viewing Note:

4	1x eSATA for data export Note: Do not connect hard disk drives for recording.	If the system is only connected to the DVI port, no video signal is displayed until the system has started completely. This can take 1 – 2 minutes. A video signal is always displayed when the monitor is connected to the VGA port.
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2.2 LED description - front panel

This chapter describes the LED displays on the front of the chassis.

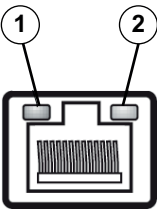
LED indicator	LED color	LED state	Description
Power LED	N/A	Off	Power off
	Blue	On (default)	Working (S0 state)
HDD LED	N/A	Off	No disk access
	Blue	Blinking	Disk access
LAN LED	N/A	Off	Network disconnected
	Blue	On	Network connected
	Blue	Blinking	Network activity
System LED	N/A	Off	Power off
	Blue	On (default)	System has booted in normal operation.

LED indicator	LED color	LED state	Description
	Blue	Blinking	System is booting or shutting down
	Red	On	Critical event occurred, such as degraded RAID volume. Bosch also provides the API and then application program is able to control this status.
Individual hard disk LED	N/A	Off (default)	Hard drive not present.
	Blue	On	Hard drive present.
	Red	On	Bosch provides the API to let application program to control this status.

2.3 LAN port LED description - rear panel

This chapter describes the LAN port LED on the rear of the chassis.

LAN connector:



Nr.	LED indicator	LED color	LED state	NIC state
1	RJ45 LED (left)	N/A	Off	No connection or 10 Mb/s
		Green	On	100 Mb/s
		Yellow	On	1000 Mb/s
2	RJ45 LED (right)	Yellow	On	Active connection
		Yellow	Blinking	Transmit or receive activity

3 System setup - first steps

The following installation directive provides information on Installation and Configuration.

DIVAR IP systems are based on Windows Storage Server 2008 R2 operating system.

This chapter is valid for DIVAR IP models that come with pre-installed hard drives. Empty units start into the DOM recovery menu on first start. The recovery process is described in the installation manual.

See also:

- *Additional Documentation and client software, page 33*

3.1 Introduction

DIVAR IP systems are shipped with a pre-installed Configuration Wizard from factory.

3.2 Setup instruction

All DIVAR IP systems are preconfigured with a default IP address and with default iSCSI settings.

- IP Address: 192.168.0.200
- Subnet mask: 255.255.255.0

Observe the following:

- DIVAR IP needs to have an active network link during installation. Make sure that the network switch you are connecting to is powered on.
- The default IP address must not be occupied by any other device in the network.
- Determine whether the initial installation is on a DHCP network. If not then you must assign valid IP addresses to the video devices. Consult the local IT administrator to obtain a valid IP address range to be used with DIVAR IP and associated devices.
- The default iSCSI settings are optimized for use with VRM.

User with administrator rights:

- User: BVRAdmin
- Password: WSS4Bosch

**Notice!**

We strongly recommended not changing the user settings. Changing the user settings can result in malfunctioning of the system.

3.3 Starting the application

DIVAR IP system is ready to go out of the box. The application provides a simple to install and intuitive to use solution for network surveillance systems.


To start the application:

1. Connect the unit and the cameras to the network.
2. Turn on the unit.
The Windows Storage Server 2008 R2 setup process starts.
3. Select the appropriate language for the installation, then click **Next**.
4. In the **Country or region, Time and currency** and **Keyboard layout** lists, click the appropriate item, then click **Next**.
The Microsoft Software License Terms and the EULA (End User License Agreement) are displayed.
5. Accept the license terms, then click **Start**. Windows restarts.
6. After restart is finished, press CTR+ALT+DELETE. The Windows logon page is displayed.
7. Enter the default password **WSS4Bosch**.
8. After entering the password, a message is displayed that you must change the password before logging on the first time. To confirm, click **OK**.
9. Change the password.

A series of scripts perform important setup tasks. This can take several minutes. Do not turn off the computer.

A page is displayed where you can perform initial Windows configuration tasks.

Note: In case of password loss a system recovery must be performed as described in the installation manual. The configuration must be done from scratch or must be imported.

10. Click the **Set time zone, Configure networking** and **Provide computer name and domain** link, enter the appropriate information, then click **Close**. Windows restarts.
11. Press CTR+ALT+DELETE. The Windows logon page is displayed.
12. Enter the password.
The Bosch VMS default screen is displayed.
13. Double-click the **Bosch VMS Wizard** icon  to start the Configuration Wizard.
The **Welcome** page is displayed.
14. Configure the system using the Configuration Wizard.

Notice!



If the IP addresses of devices that should be added fall within the same IP range as the DIVAR IP, you can use the Configuration Wizard. In all other cases we recommend using the Bosch VMS Configuration Client.

Notice!



To perform administrative tasks, the BVRAdmin account can be entered when Bosch VMS default screen is displayed. To do so, press CTRL+ALT+DEL, then hold down SHIFT while clicking the **Switch User** option.

See also:

- *Using Bosch VMS Configuration Wizard, page 19*

- *Using Bosch VMS Configuration Client, page 30*
- *Additional Documentation and client software, page 33*

3.4 Using Bosch VMS Configuration Wizard

Intended use for Configuration Wizard is the quick and easy configuration of a smaller system. Configuration Wizard helps you to achieve a configured system including VRM, iSCSI system, cameras, recording profiles and user groups. User groups and their permissions are configured automatically. You can add or remove users and set passwords.

Configuration Wizard can access Management Server only on the local computer.

You can save an activated configuration for backup purposes and import this configuration later. You can change this imported configuration after import.

Configuration Wizard adds the local VRM automatically.

Restrictions:

The following tasks cannot be done with the Configuration Wizard. Use Bosch VMS Configuration Client instead.

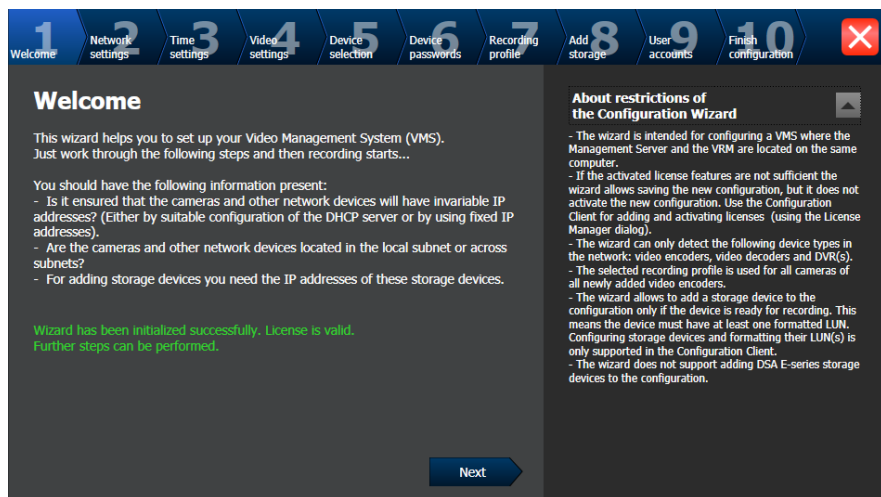
- adding additional license packages
- adjusting schedules
- configuring systems with no or multiple VRM
- configuring external storage devices
- all advanced configurations beyond a basic setup (maps or alarms, for example)

For these tasks refer to the Bosch VMS manual (see *Additional Documentation and client software, page 33*):

To achieve a quick configuration using the Configuration Wizard:

1. On the Bosch VMS default screen, double-click the **Bosch VMS Wizard** icon. The **Welcome** page is displayed.
2. Run-through the following pages of the wizard.

Welcome page



If the connection to the Management Server cannot be established, a corresponding error message is displayed. You cannot continue working with Configuration Wizard.

If VRM is not available on the computer, a corresponding error message is displayed. You cannot continue working with Configuration Wizard.

If the license check fails, a corresponding error message is displayed. You cannot continue working with Configuration Wizard.

Network settings page

1 Welcome 2 **Network settings** 3 Time settings 4 Video settings 5 Device selection 6 Device passwords 7 Recording profile 8 Add storage 9 User accounts 10 Finish configuration

Network settings

Computer name: DLA1400-BVMS

Network settings: Local Area Connection 3

☒ Auto settings (via DHCP)

IP address: 172.26.3.81

Subnet mask: 255.255.248.0

Default gateway: 172.26.0.1

DNS server: 172.26.3.2

Next

Please assign a name to the computer and specify the network settings.

We recommend using the automatic settings for obtaining an IP address from a DHCP server if available.

You configure the network settings of the operating system. As soon as you click **Next** button, the settings are activated.

If you have changed any setting on this page, click **Reboot** to restart the system.

Notice!

If a DHCP server is employed in the network for the dynamic assignment of IP addresses, activate acceptance of IP addresses automatically assigned to the device.



Certain applications (VRM, Bosch Video Management System, Bosch Video Client, Configuration Manager) use the IP address for the unique assignment of the device. If using these applications, the DHCP server must support the fixed assignment between IP address and MAC address, and must be appropriately set up so that, once an IP address is assigned, it is retained each time the system is rebooted.

Time settings page

1Welcome

2Network settings

3Time settings

4Video settings

5Device selection

6Device passwords

7Recording profile

8Add storage

9User accounts

10Finish configuration

X

Time settings

Time zone: (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockh ▼

☒ Automatically adjust clock for Daylight Saving Time

Date: Tuesday, March 19, 2013 ▼

Time: 11:17:16 AM ▼

Time server: time.windows.com

Next

In the field 'Time server' you can specify the IP address or URL of a NTP time server for automatic periodical synchronization of time. You can specify several time servers in the field, separated by blanks; this increases the accuracy of time and provides for fail safety if a time server should not be available. For best results it is recommend to specify local or regional time servers.

You configure the time settings of the operating system.

Video settings page

The screenshot shows the 'Video settings' page, which is the fourth step in a 10-step setup process. The steps are: 1. Welcome, 2. Network settings, 3. Time settings, 4. Video settings (current), 5. Device selection, 6. Device passwords, 7. Recording profile, 8. Add storage, 9. User accounts, and 10. Finish configuration. A red 'X' icon is visible at the end of the step bar.

Latest saved configuration

Devices and services included in the latest saved configuration

Network address	Device type	Recording Profile	Recorder

The active configuration is identical with the latest saved configuration.

Video recording manager (VRM) service is found and is running.

Please select the network adapter for your local video network:

Local Area Connection 3 (Type: Ethernet; IPv4-Address: 172.26.3.81)

Next

Import configuration

Note: The content of the imported configuration is saved immediately as a change to the local configuration. This change becomes active only if you apply it on the last page. Import is only possible when the active configuration is identical with the latest saved configuration.

Import configuration ...

Changes on the following pages are only saved and activated if you apply them on the last page.

This page displays the devices and services that are included in the latest saved configuration. You can import a configuration.

Device selection page

1

Welcome

2

Network settings

3

Time settings

4

Video settings

5

Device selection

6

Device passwords

7

Recording profile

8

Add storage

9

User accounts

10

Finish configuration

X

Select video devices to be added

All

None

Include	IP address	Device type
✓	172.26.6.8	Auto Dome Easy
✓	172.26.4.206	Auto Dome EasyII
✓	172.26.4.209	AutoDome 700 IP
✓	172.26.5.103	AutoDome Junior HD
✓	172.26.5.104	AutoDome Junior HD
✓	172.26.5.250	AutoDome Junior HD
✓	172.26.4.54	AutoDome Junior HD
✓	172.26.5.108	AutoDome Junior HD fixed
✓	172.26.5.107	AutoDome Junior HD fixed

Network scan was stopped.

Next

The list shows all video devices found by the network scan which are not included in the latest saved video configuration. By default all these devices are added to the configuration. Please deselect the devices that should not be added to the configuration.

Range of network scan:

☐ Local subnet only (recommended)

☒ Complete accessible network

Rescan network

Missing licenses:

Feature	Number
Encoder and Decoder Channels	568
Digital Video Recorders	3

Reduce selected devices or license your configuration later.

This page displays all video devices that are not included in the latest saved configuration.



Deselect the devices that should not be added to the configuration, then click **Next**.

Device passwords page

Enter password for added devices

☐ Show passwords

Default password:

Device name	IP address	User name	Password	Status
NBC-225-P (172.26.4.40)	172.26.4.40	service	*****	
VIP X1600 XFM4 (172.26.4.140)	172.26.4.140	service	*****	

The network access to the video devices is usually password-protected. Here you can type in the password for the access to each added device.

You can set a default password which is used for all network devices. If needed you can enter a password deviating from the default in each row.

This page is used to authenticate password protected devices. This can either be done for all cameras at once (if passwords are identical) or for each camera individually. Configuration Client must be used in order to set or change device passwords. Password check is performed automatically, when you do not enter a character in a password field for a few seconds or you click outside the password field.

Recording profile page

For different profile assignments to different cameras you must execute Configuration Wizard multiple times.

Note:

Before selecting a recording profile observe the following:

- **Recording profile details**

All video devices use the default recording profile details.

Profile	Scheduled Time	Continuous	Pre-Alarm	Past alarm
Alarm Recording	Day/ Night/ Weekend	-	Normal Quality 10 Seconds	Good Quality 10 Seconds
Alarm Recording Night and Weekend	Night and Weekend	-	Normal Quality 10 Seconds	Good Quality 10 Seconds
Continuous , Alarm Recording	Day/ Night/ Weekend	Continuous Normal Quality	-	Good Quality 10 Seconds
Recording	Day/ Night/ Weekend	Continuous Normal Quality	-	-
Recording Night and Weekend	Night and Weekend	Continuous Normal Quality	-	-

To change these use the Bosch VMS Configuration Client.

- **Stream quality settings**

All video devices use the default settings for Stream 1 to record.

Name	SD Resolution	Frames per second(FPS)	Target Bit Rate	Maximum Bit Rate
Normal	CIF	7.5 IPS	512 Kbps	1024 Kbps
Good	2CIF	15 IPS	1024 Kbps	2048 Kbps
Excellent	4CIF	30 IPS	2048 Kbps	4096 Kbps
HD 720P	HD 720P	30 IPS	5000 Kbps	10000 Kbps
HD1080P	HD1080P	30 IPS	5000 Kbps	10000 Kbps

To change these use the Bosch VMS Configuration Client.

– **Schedule**

The default schedule is used for all recording profiles.

The Day schedule is active from 8 a.m. until 6 p.m., Monday through Friday.

The Night schedule is active from 6 p.m. until 8 a.m., Monday through Friday.

The Weekend schedule is active 24 hours a day for Saturday and Sunday.

To change the schedule use the Bosch VMS Configuration Client.

Add storage page

Add storage

1 Welcome 2 Network settings 3 Time settings 4 Video settings 5 Device selection 6 Device passwords 7 Recording profile 8 **Add storage** 9 User accounts 10 Finish configuration

Add storage ... Remove selected storage

IP address	Storage type
172.26.3.81	1400 Series Storage Array

Internal storage preparation is succeeded.

Next

Here you can add iSCSI storage devices available in the network for storing video recordings. More storage space allows longer storage of the video recordings.

This page allows the addition of additional iSCSI storage devices. For limitations, refer to the datasheet available in the online catalog.

Notice!



If the wizard stops and the message appears, that the internal iSCSI storage is not ready for recording because the LUNs are not formatted, you must format the LUNs using Bosch VMS Configuration Client.

To format the LUNs, see Bosch VMS Configuration Manual, Chapter **Formatting a LUN**.

User accounts page

The screenshot shows the 'User accounts and passwords' configuration page. At the top, a navigation bar contains 10 steps: 1 Welcome, 2 Network settings, 3 Time settings, 4 Video settings, 5 Device selection, 6 Device passwords, 7 Recording profile, 8 Add storage, 9 User accounts (highlighted), and 10 Finish configuration. A red 'X' icon is on the far right of the bar.

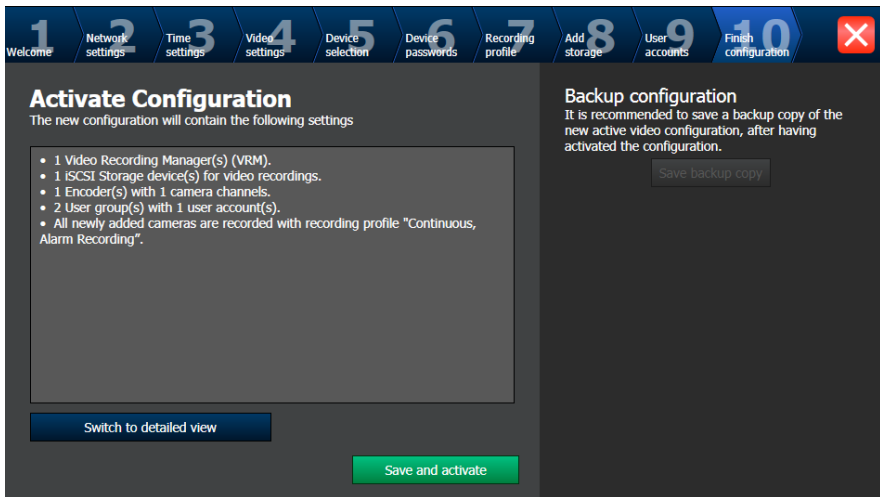
The main content area is titled 'User accounts and passwords'. It includes a 'Show passwords' checkbox and an 'Add user ...' button. On the left, a 'User Groups' sidebar lists 'User Groups', 'Admin Group', 'Admin', and 'Operator Group'. The 'Admin' group is selected. The 'User Properties' section on the right contains fields for 'Full name', 'Description', and 'Password'. The 'Password' section includes a 'Minimum password length' slider set to 0, and fields for 'Enter new password' and 'Confirm password'. An 'Apply' button is at the bottom right of the 'User Properties' section, and a 'Next' button is at the bottom right of the main content area.

Here you can specify the names and passwords of users in predefined groups, and you can add further users to the predefined groups.

Different user groups have different permissions. These permissions define the operations allowed for users in this user group.

You can add users and passwords. Use Configuration Client to add user groups and to change permissions.

Finish configuration page



After clicking **Save and activate** the configuration is activated. After successful activation the **Activate Configuration** page is displayed again. Now you can store a backup of the configuration if desired: Click **Save backup copy**.

3.5 Using Bosch VMS Configuration Client

If the IP addresses of devices that should be added do not fall within the same IP range as the DIVAR IP, we recommend using the Bosch VMS Configuration Client.

To assign device IP addresses:

1. On the Bosch VMS default screen, double-click the



Configuration Client icon to change device network settings. The application starts.

2. Enter the following, then click **OK**.

User name: admin

Password: no password required (if not set with the wizard)

Connection: 127.0.0.1

3. On the **Hardware** menu, click **Initial Device Scan**.

The application performs a network scan for all defaulted devices.

4. To assign all devices at once, click **Select All**, then right-click the selected devices, then click **SetIP Addresses**. The **Set IP Addresses** dialog box is displayed.

Note:

It is also possible to configure the devices individually with specific IP addresses based on MAC address.

5. Enter the starting IP address for the address range you want to use, click the **Calculate** tab, then click **OK**.
6. To restart the devices, click **OK**.
7. Close Configuration Client .

To perform further functionalities refer to the Bosch VMS manual. References to the manual are described in *Additional Documentation and client software*, page 33.

3.6 Using Bosch VMS Operator Client

Use Bosch VMS Operator Client to verify the live, recording and playback functionality of DIVAR IP.

To verify live image functionality in the Operator Client

1. On the Bosch VMS default screen, double-click the



Operator Client icon. The application starts.

2. Enter the following and click **OK**.

User name: admin

Password: no password required (if not set with the wizard)

Connection: 127.0.0.1

3. Click the live image icon. The Logical Tree with the cameras is displayed.
4. Select a camera and drag it to an image window. The image of the camera is displayed if the camera is assigned correctly.

Note:

Cameras in the image window with a red dot in the camera's icon are viewed live.

To verify recording functionality in the Operator Client

- ▶ Cameras in the Logical Tree with a red dot in the camera's icon are recording.

To verify playback functionality in the Operator Client

- ▶ The time line moves if the a camera is viewed in playback mode.

Performance overview live:

	4CIF		
	2.5 Mbit	5 Mbit	10 Mbit
Number of software monitors	17	13	8

	720p		
	2.5 Mbit	5 Mbit	10 Mbit
Number of software monitors	12	10	5

	1080p		
	2.5 Mbit	5 Mbit	10 Mbit
Number of software monitors	6	5	3

To perform further functionalities refer to the Bosch VMS manual. References to the manual are described in *Additional Documentation and client software, page 33*.

4 Additional Documentation and client software

Documentation for Bosch Security System products can be found as follows:

- ▶ www.boschsecurity.com > select your region and your country > select **Product Catalog** > start a search for your product > select the product in the search results to show the existing documents.

And on the following network share:

- ▶ \\<IP address of DIVAR IP>\sources

5 End-user license agreement (EULA)

This chapter informs you about the Microsoft License Terms for Microsoft Windows Storage Server 2008 R2 Standard.
Please read the following pages carefully.

MICROSOFT SOFTWARE LICENSE TERMS**MICROSOFT WINDOWS STORAGE SERVER 2008 R2 STANDARD**

These license terms are an agreement between you and

- the server manufacturer that distributes the software with the server; or
- the software installer that distributes the software with the server.

Please read them. They apply to the software named above, which includes the media on which you received it, if any. Printed paper license terms, which may come with the software, take place of any on-screen license terms. The terms also apply to any Microsoft

- updates,
- supplements,
- Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply. If you obtain updates or supplements directly from Microsoft, Microsoft, and not the manufacturer or installer, licenses those to you.

By using the software, you accept these terms. If you do not accept them, do not use the software. Instead, contact the manufacturer or installer to determine its return policy for a refund or credit.

As described below, using the software also operates as your consent to the transmission of certain computer information during activation, validation and for Internet-based services.

If you comply with these license terms, you have the rights below for each software license you acquire.

1. OVERVIEW.**a. Software.** The software includes

- server software; and
- additional software that may only be used with the server software directly, or indirectly through other additional software.

b. License Model. The software is licensed based on

- the number of instances of server software that you run.

c. Licensing Terminology.

- **Instance.** You create an "instance" of software by executing the software's setup or install procedure. You also create an instance of software by duplicating an existing instance. References to software in this agreement include "instances" of the software.
- **Run an Instance.** You "run an instance" of software by loading it into memory and executing one or more of its instructions. Once running, an instance is considered to be running (whether or not its instructions continue to execute) until it is removed from memory.
- **Operating System Environment.** An "operating system environment" is
 - all or part of an operating system instance, or all or part of a virtual (or otherwise emulated) operating system instance which enables separate machine identity (primary computer name or similar unique identifier) or separate administrative rights, and
 - instances of applications, if any, configured to run on the operating system instance or parts identified above.

There are two types of operating system environments, physical and virtual. A physical operating system environment is configured to run directly on a physical hardware system. The operating system instance used to run hardware virtualization software (e.g. Microsoft Virtual Server or similar technologies) or to provide hardware virtualization services (e.g. Microsoft virtualization technology or similar technologies) is considered part of the physical operating

system environment. A virtual operating system environment is configured to run on a virtual (or otherwise emulated) hardware system. A physical hardware system can have either or both of the following:

- one physical operating system environment
- one or more virtual operating system environments.
- **Server.** A server is a physical hardware system capable of running server software. A hardware partition or blade is considered to be a separate physical hardware system.
- **Assigning a license.** To assign a license means simply to designate that license to one server or user.

2. USE RIGHTS.

a. Assignment of the License to the Server. The software license is permanently assigned to the server with which you acquired the software. If you run the software on a hardware partition, that partition is the server to which the license must be assigned. That server is the licensed server for that particular license. You may assign other software licenses to the same server, but you may not assign the same license to more than one server.

b. Running Instances of the Server Software.

- i. You may run, at any one time, one instance of the server software in one physical and one virtual operating system environment on the licensed server.
- ii. If you run both permitted instances at the same time, the instance of the server software running in the physical operating system environment may be used only to:
 - run hardware virtualization software
 - provide hardware virtualization services
 - run software to manage and service operating system environments on the licensed server.

c. Running Instances of the Additional Software. You may run or otherwise use any number of instances of additional software listed below in physical or virtual operating system environments on any number of servers. You may use additional software only with the server software directly, or indirectly through other additional software.

- AD Migration Tool
- FRS Monitoring Tools
- Remote Desktop Connection Client
- RSAT Client

d. Creating and Storing Instances on Your Servers or Storage Media. You have the additional rights below for each software license you acquire.

- You may create any number of instances of the server software and additional software.
- You may store instances of the server software and additional software on any of your servers or storage media.
- You may create and store instances of the server software and additional software solely to exercise your right to run instances of the server software under any of your software licenses as described (e.g., you may not distribute instances to third parties).

e. Included Microsoft Programs. The software contains other Microsoft programs. These license terms apply to your use of those programs.

f. Font Components. While the software is running, you may use its fonts to display and print content. You may only

- embed fonts in content as permitted by the embedding restrictions in the fonts; and
- temporarily download them to a printer or other output device to print content.

g. Icons, images and sounds. While the software is running, you may use but not share its icons, images, sounds, and media.

3. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.

- a. Specific Use.** The manufacturer or installer designed this server for a specific use. You may only use the software for that use.

You may not use the software to support additional software programs or functions, other than utilities or similar software used solely for administration, performance enhancement, preventative maintenance, or to provide complimentary data storage functionality for this server.

- b. Software Use Limits.** You are not licensed to use any of the following functions of the server software:
- i. Active Directory.** You may not use of the server software as a domain controller or any other use of DCPromo.exe.
 - ii. Network Infrastructure Services.** You may not use any functions of the server software necessary to support a server network infrastructure. For example, you may not use Routing and Remote Access Service (RRAS), Windows Internet Name Service (WINS), or. You may, however, use the Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Read Only Domain Controller (RODC) server functions and any network infrastructure client functions, such as DNS or DHCP clients.
 - iii. Terminal Services.** This function enables servers to use server software, or other software used with the server software to provide similar services. Terminal Services may be used only to the extent required to manage the server Software in Remote Administration Mode.
 - iv. Network Load Balancing Services.**
 - v. Server Roles.** You may not use of the following features or functions:
 - Active Directory Certificate Services
 - Active Directory Domain Services
 - Active Directory Federation Services
 - Active Directory Management Services
 - Application Server
 - Network Policy and Access Services
 - UDDI Services
 - Windows Deployment Services
- c. Limitation on Functions Supported by the Software.** The manufacturer or installer licenses you to use the server software to support only the base functions as provided and installed on this server. You are not licensed to use the server to run or support
- i.** enterprise database software (such as Microsoft SQL Server), except non-enterprise engines such as Microsoft SQL Server 2008 Express Edition. The server software also may run or support enterprise database engines (including Microsoft SQL Server) that are integrated in and used only to support the server software as part of the specific use for which the manufacturer or installer designed this server,
 - ii.** enterprise resource planning (ERP) software,
 - iii.** messaging or enterprise mail,
 - iv.** Microsoft Exchange or Microsoft SharePoint Portal Server,
 - v.** team collaboration software, and/or
 - vi.** web-based time management applications that address appointment, meeting and other calendar items.
- These limitations do not restrict use of the server for data management (such as providing storage and backup functions) for the software identified above.
- d. No Windows Server CALs Required.** Servers that access or use functions of Windows Storage Server software licensed under these license terms do not require a client access license (CAL). Obtaining a CAL for any Microsoft product does not grant you rights to use functions of the server software not licensed under these license terms.

- e. **Windows Server 2008 R2 Rights Management Services Access.** You must acquire a Windows Server 2008 Rights Management Services CAL for each user account through which a user directly or indirectly accesses the Windows Server 2008 R2 Rights Management Services functionality.

4. MANDATORY ACTIVATION

Activation associates the use of the software with a specific server. During activation, the software will send information about the software and the server to Microsoft. This information includes the version, language and product key of the software, the Internet protocol address of the server, and information derived from the hardware configuration of the server. **The manufacturer or installer should have activated the software for you.** For more information, see <http://www.microsoft.com/piracy/mpa.aspx>. By using the software, you consent to the transmission of this information. If the server is connected to the Internet, the software may automatically connect to Microsoft for activation. You can also activate the software manually by Internet or telephone. If you do so, Internet and telephone service charges may apply. Some changes to your computer components or the software may require you to reactivate the software.

5. VALIDATION

- a. **If the manufacturer or installer activated the software for you, you may not be asked to activate the software when you first use it. The software will from time to time validate the software, update or require download of the validation feature of the software. Validation verifies that the software has been activated and is properly licensed. Validation also permits you to use certain features of the software or to obtain additional benefits. For more information, see <http://go.microsoft.com/fwlink/?linkid=39157>.**
- b. During a validation check, the software will send information about the software and the server to Microsoft. This information includes the version and product key of the software, and the Internet protocol address of the server. Microsoft does not use the information to identify or contact you. By using the software, you consent to the transmission of this information. For more information about validation and what is sent during a validation check, see <http://go.microsoft.com/fwlink/?linkid=69500>.
- c. If, after a validation check, the software is found not to be properly licensed, the functionality of the software may be affected. For example, you may
- need to reactivate the software, or
 - receive reminders to obtain a properly licensed copy of the software,
- or you may not be able to
- use or continue to use some of the features of the software, or
 - obtain certain updates or upgrades from Microsoft.
- d. You may only obtain updates or upgrades for the software from Microsoft or authorized sources. For more information on obtaining updates from authorized sources see <http://go.microsoft.com/fwlink/?linkid=69502>.

6. INTERNET-BASED SERVICES. Microsoft provides Internet-based services with the software. Microsoft may change or cancel them at any time.

- a. **Consent for Internet-Based Services.** The software features described below connect to Microsoft or service provider computer systems over the Internet. In some cases, you will not receive a separate notice when they connect. You may switch off these features or not use them. For more information about these features, visit <http://go.microsoft.com/fwlink/?linkid=34493>. **By using these features, you consent to the transmission of this information.** Microsoft does not use the information to identify or contact you.
- b. **Computer Information.** The following features use Internet protocols, which send to the appropriate systems computer information, such as your Internet protocol address, the type of operating system, browser and name and version of the software you are using, and the language code of the server where you installed the software. Microsoft uses this information to make the Internet-based services available to you.

- **Windows Update Feature.** You may connect new hardware to the server when you run the software. Your server may not have the drivers needed to communicate with that hardware. If so, the update feature of the software can obtain the correct driver from Microsoft and run it on your server. You can switch off this update feature.
- **Web Content Features.** Features in the software can retrieve related content from Microsoft and provide it to you. To provide the content, these features send to Microsoft the type of operating system, name and version of the software you are using, type of browser and language code of the server where you run the software. Examples of these features are clip art, templates, online training, online assistance and Appshelp. You may choose not to use these web content features.
- **Digital Certificates.** The software uses digital certificates. These digital certificates confirm the identity of Internet users sending X.509 standard encrypted information. The software retrieves certificates and updates certificate revocation lists. These security features operate only when you use the Internet.
- **Auto Root Update.** The Auto Root Update feature updates the list of trusted certificate authorities. You can switch off the Auto Root Update feature.
- **Windows Media Digital Rights Management.** Content owners use Windows Media digital rights management technology (WMDRM) to protect their intellectual property, including copyrights. This software and third party software use WMDRM to play and copy WMDRM-protected content. If the software fails to protect the content, content owners may ask Microsoft to revoke the software's ability to use WMDRM to play or copy protected content. Revocation does not affect other content. When you download licenses for protected content, you agree that Microsoft may include a revocation list with the licenses. Content owners may require you to upgrade WMDRM to access their content. Microsoft software that includes WMDRM will ask for your consent prior to the upgrade. If you decline an upgrade, you will not be able to access content that requires the upgrade. You may switch off WMDRM features that access the Internet. When these features are off, you can still play content for which you have a valid license.
- **Windows Media Player.** When you use Windows Media Player, it checks with Microsoft for
 - compatible online music services in your region;
 - new versions of the player; and
 - codecs if your server does not have the correct ones for playing content.You can switch off this last feature. For more information, go to <http://www.microsoft.com/windows/windowsmedia/player/11/privacy.aspx>
- **Malicious Software Removal/Clean On Upgrade.** Before installation of the software, the software will check and remove certain malicious software listed at <http://www.support.microsoft.com/?kbid=890830> ("Malware") from your server. When the software checks your server for Malware, a report will be sent to Microsoft about any Malware detected or errors that occurred while the software was checking for Malware. No information that can be used to identify you is included in the report. You may disable the software's Malware reporting functionality by following the instructions found at <http://www.support.microsoft.com/?kbid=890830>.
- **Network Connectivity Status Icon.** This feature determines whether a system is connected to a network by either passive monitoring of network traffic or active DNS or HTTP queries. The query only transfers standard TCP/IP or DNS information for routing purposes. You can switch off the active query feature through a registry setting.
- **Windows Time Service.** This service synchronizes with time.windows.com once a week to provide your computer with the correct time. You can turn this feature off or choose your preferred time source within the Date and Time Control Panel applet. The connection uses standard NTP protocol.
- **IPv6 Network Address Translation (NAT) Traversal service (Teredo).** This feature helps existing home Internet gateway servers transition to IPv6. IPv6 is a next generation Internet protocol.

It helps enable end-to-end connectivity often needed by peer-to-peer applications. To do so, each time you start up the software the Teredo client service will attempt to locate a public Teredo Internet service. It does so by sending a query over the Internet. This query only transfers standard Domain Name Service information to determine if your computer is connected to the Internet and can locate a public Teredo service. If you

- use an application (e.g. Windows Meeting Space) that needs IPv6 connectivity or
- configure your firewall to always enable IPv6 connectivity

by default standard Internet Protocol information will be sent to the Teredo service at Microsoft at regular intervals. No other information is sent to Microsoft. You can change this default to use non-Microsoft servers. You can also switch off this feature using a command line utility named "netsh".

- Windows Rights Management Services. The software contains a feature that allows you to create content that cannot be printed, copied or sent to others without your permission. You must connect to Microsoft to use this feature for the first time. Once a year, you must reconnect to Microsoft to update it. For more information, go to <http://go.microsoft.com/fwlink/?LinkId=52646>. You may choose not to use this feature.

c. Use of Information. Microsoft may use the computer information, error reports, and Malware reports to improve our software and services. We may also share it with others, such as hardware and software vendors. They may use the information to improve how their products run with Microsoft software.

d. Misuse of Internet-based Services. You may not use these services in any way that could harm them or impair anyone else's use of them. You may not use the services to try to gain unauthorized access to any service, data, account or network by any means.

7. DATA STORAGE TECHNOLOGY. The server software includes data storage technology called Windows Internal Database. Components of the server software use this technology to store data. You may not otherwise use or access this technology under this agreement.

8. BENCHMARK TESTING. The software includes one or more components of the .NET Framework ("NET Components"). You may conduct internal benchmark testing of those components. You may disclose the results of any benchmark test of those components, provided that you comply with the conditions set forth at <http://go.microsoft.com/fwlink/?LinkId=66406>. Notwithstanding any other agreement you may have with Microsoft, if you disclose such benchmark test results, Microsoft shall have the right to disclose the results of benchmark tests it conducts of your products that compete with the applicable .NET Component, provided it complies with the same conditions set forth at <http://go.microsoft.com/fwlink/?LinkId=66406>.

9. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. The manufacturer or installer and Microsoft reserve all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that allow you to use it only in certain ways. For more information, see the software documentation or contact the manufacturer or installer. Except and only to the extent permitted by applicable law despite these limitations, you may not:

- work around any technical limitations in the software;
- reverse engineer, decompile or disassemble the software;
- make more copies of the software than specified in this agreement;
- publish the software for others to copy;
- rent, lease or lend the software; or
- use the software for commercial software hosting services.

Except as expressly provided in this agreement, rights to access the software on this server do not give you any right to implement Microsoft patents or other Microsoft intellectual property in software or devices that access this server.

You may use remote access technologies in the software such as Remote Desktop to access the software remotely from another device. You are responsible for obtaining any licenses required for use of these protocols to access other software.

10.BACKUP COPY. You may make one backup copy of the software media. . You may only restore the backup image to the same server from which the backup was created. You may use it only to create instances of the software.

11.DOCUMENTATION. Any person that has valid access to your computer or internal network may copy and use the documentation for your internal, reference purposes.

12.NOTICE ABOUT THE MPEG-4 VISUAL STANDARD. This software includes MPEG-4 visual decoding technology. This technology is a format for data compression of video information. MPEG LA, L.L.C. requires this notice:

USE OF THIS PRODUCT IN ANY MANNER THAT COMPLIES WITH THE MPEG 4 VISUAL STANDARD IS PROHIBITED, EXCEPT FOR USE DIRECTLY RELATED TO (A) DATA OR INFORMATION (i) GENERATED BY AND OBTAINED WITHOUT CHARGE FROM A CONSUMER NOT THEREBY ENGAGED IN A BUSINESS ENTERPRISE, AND (ii) FOR PERSONAL USE ONLY; AND (B) OTHER USES SPECIFICALLY AND SEPARATELY LICENSED BY MPEG LA, L.L.C.

If you have questions about the MPEG-4 visual standard, please contact MPEG LA, L.L.C., 250 Steele Street, Suite 300, Denver, Colorado 80206; www.mpegla.com.

13.NOTICE ABOUT THE VC-1 VISUAL STANDARD. This software may include VC-1 visual decoding technology. MPEG LA, L.L.C. requires this notice:

THIS PRODUCT IS LICENSED UNDER THE VC-1 PATENT PORTFOLIO LICENSES FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (A) ENCODE VIDEO IN COMPLIANCE WITH THE VC-1 STANDARD ("VC-1 VIDEO") OR (B) DECODE VC-1 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE VC-1 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE.

If you have questions about the VC-1 visual standard, please contact MPEG LA, L.L.C., 250 Steele Street, Suite 300, Denver, Colorado 80206; www.mpegla.com.

14.ENTIRE AGREEMENT. This agreement (including the warranty below), and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.

15.APPLICABLE LAW.

United States. If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.

Outside the United States. If you acquired the software in any other country, the laws of that country apply.

16.LEGAL EFFECT. This agreement describes certain legal rights. You may have other rights under the laws of your state or country. You may also have rights with respect to the party from whom you acquired the software. This agreement does not change your rights under the laws of your state or country if the laws of your state or country do not permit it to do so.

17.SECONDARY BOOT AND RECOVERY COPIES OF THE SOFTWARE

- a. **Secondary Boot Copy.** If a secondary boot copy of the server software is installed on the server, you may access, boot from, display and run it solely in the event of a failure, malfunction, or corruption of the primary operating copy of the server software, and only until the primary operating copy has been repaired or reinstalled. You are not licensed to boot from and use both the primary operating copy and the secondary boot copy of the server software at the same time.
- b. **Recovery Copy.** You may use recovery copy solely to repair or reinstall the server software on the server.

18. LEASED HARDWARE. If you lease the server from the manufacturer or installer, the following additional terms shall apply: (i) you may not transfer the software to another user as part of the transfer of the server, whether or not a permanent transfer of the software with the server is otherwise allowed in these license terms; (ii) your rights to any software upgrades shall be determined by the lease you signed for the server; and (iii) you may not use the software after your lease terminates, unless you purchase the server from the manufacturer or installer.

19. NO RENTAL. You may not rent, lease, lend, or provide commercial hosting services with the SOFTWARE.

20. PRODUCT SUPPORT. Contact the manufacturer or installer for support options. Refer to the support number provided with the server.

21. BACKUP COPY. You may make one backup copy of the software. You may use it only to reinstall the software on the server.

22. PROOF OF LICENSE. If you acquired the software on the server, or on a disc or other media, a genuine Certificate of Authenticity label with a genuine copy of the software identifies licensed software. To be valid, this label must be affixed to the server, or included on or in the manufacturer or installer's software packaging. If you receive the label separately, it is not valid. You should keep the label on the server or packaging to prove that you are licensed to use the software. To identify genuine Microsoft software, see <http://www.howtotell.com>.

23. TRANSFER TO A THIRD PARTY. You may transfer the software only with the server, the Certificate of Authenticity label, and these license terms directly to a third party. Before the transfer, that party must agree that these license terms apply to the transfer and use of the software. You may not retain any copies of the software including the backup copy.

24. NOT FAULT TOLERANT. The software is not fault tolerant. The manufacturer or installer installed the software on the server and is responsible for how it operates on the server.

25. RESTRICTED USE. The Microsoft software was designed for systems that do not require fail-safe performance. You may not use the Microsoft software in any server or system in which a malfunction of the software would result in foreseeable risk of injury or death to any person. This includes operation of nuclear facilities, aircraft navigation or communication systems and air traffic control.

26. NO WARRANTIES FOR THE SOFTWARE. The software is provided "as is". You bear all risks of using it. Microsoft gives no express warranties, guarantees or conditions. Any warranties you receive regarding the server or the software do not originate from, and are not binding on, Microsoft or its affiliates. When allowed by your local laws, the manufacturer or installer and Microsoft exclude implied warranties of merchantability, fitness for a particular purpose and non-infringement.

27. LIMITATION ON AND EXCLUSION OF DAMAGES. Except for any refund the manufacturer or installer may provide, you cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.

This limitation applies to

anything related to the software, services, content (including code) on third party Internet sites, or third party programs; and

claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if

repair, replacement or a refund for the software does not fully compensate you for any losses; or

the manufacturer or installer, or Microsoft knew or should have known about the possibility of the damages.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. They also may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

28. EXPORT RESTRICTIONS. The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the

software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.

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